

## REMARKS

Claims 1-24 are pending in the instant application. In the most recent Office Action, Claims 1-2, 5-8, 11-14, 17-20 and 23-24 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Pat. No. 6,121,901 to Welch, et al. (hereinafter, "Welch"). Claims 3-4, 9-10, 15-16, and 21-22 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Welch in view of U.S. Pat. No. 6,606,040 to Abdat (hereinafter, "Abdat"). Applicant respectfully traverses the rejections.

Claim 1 recites an apparatus for compressing a stream of data signals into a compressed stream of code signals, the apparatus comprising, *inter alia*, means for inserting into a dictionary, for storage therein, an extended string comprising a longest match with a stream of data signals extended by a longest match with a remaining stream of data signals. The Office Action avers this feature to be taught by Welch, specifically at Col. 4, lines 32-52, and Col. 5, lines 45-58. Applicant respectfully disagrees.

Welch describes that input data characters are searched against strings stored in a dictionary until a longest match is achieved. Subsequently, the dictionary is updated by extending the string corresponding to the previous compressed output code by the current input characters until they are matched. Incrementally expanded strings are added to the dictionary, each one character longer than the previous. Welch illustrates this more clearly in Fig. 6. As shown flowing the NO path from decision box 104, where the dictionary no longer matches the input string, a new code is created at step 112, and at step 113 that new code is assigned the previous word match concatenated by a single additional current character (Col. 10, lines 36-39).

In contrast to Welch, the invention recited in claim 1 comprises means for searching a data stream to determine a longest match with stored strings, means for searching the remaining

stream to determine a longest match with stored strings, and means for inserting into the dictionary an extended string comprising the longest match with the data stream extended by the longest match with the remaining data stream. The newly inserted extended string is a combination of the two longest matches with the data stream. This will be seen as distinguished over Welch, where the new entry in to the dictionary is a combination of the longest match with the data stream and a single additional character.

Claim 7 recites a method for compressing a stream of data signals into a compressed stream of code signals, said compression method comprising, *inter alia*, inserting into a dictionary, for storage therein, an extended string comprising the longest match with a stream of data signals extended by the longest match with the remaining stream of data signals. This step will be seen as the function recited in claim 1. Since the Office Action rejects claim 7 citing the same rationale as applied to claim 1, claim 7 will be seen as distinguished for the same reasons as claim 1, *supra*.

Claim 13 recites a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for compressing a stream of data signals into a compressed stream of code signals, said method comprising, *inter alia*, inserting into a dictionary, for storage therein, an extended string comprising the longest match with a stream of data signals extended by the longest match with the remaining stream of data signals. This step will be seen as the function recited in claim 1. Since the Office Action rejects claim 13 citing the same rationale as applied to claim 1, claim 13 will be seen as distinguished for the same reasons as claim 1, *supra*.

Claim 19 recites a computer program product embodied in a computer-readable medium for compressing a stream of data signals into a compressed stream of code signals, said computer

program product comprising, *inter alia*, computer readable program code means for inserting into a dictionary, for storage therein, an extended string comprising the longest match with the stream of data signals extended by the longest match with the remaining stream of said data signals. This function will be seen as the same function recited in claim 1. Since the Office Action rejects claim 19 citing the same rationale as applied to claim 1, claim 19 will be seen as distinguished for the same reasons as claim 1, *supra*.

It has been held by the courts that "A prior art reference anticipates a claim only if the reference discloses, either expressly or inherently, every limitation of the claim." *Rowe v. Dror*, 112 F. 3d 473, 42 USPQ2d 1550 (Fed. Cir. 1997). As illustrated above, Welch does not teach or suggest all imitations of claims 1, 13 or 19. Therefore, Applicant respectfully submits that the rejection of these claims has been obviated, and kindly solicits favorable reconsideration and withdrawal of the rejection. Claims 2-12, 14-18, and 20-24 each depend, either directly or indirectly, from independent claims 1, 13, and 19, respectively. These dependent claims are each separately patentable, but are offered as patentable for at least the same reason as their underlying independent claims. Therefore, Applicant respectfully submits that all claims are patentably distinguished.

With respect to claims 3-4, 9-10, 15-16, and 21-22, the Office Action offers Abdat for its teaching relative to determining if a dictionary is full, changing, specifically, increasing, a coding size based on such determination. Assuming, *arguendo*, that Abdat teaches what is attributed to is, Applicant respectfully submits that Abdat lacks any teaching or suggestion to ameliorate the deficiencies of Welch relative to the claims. Specifically, the background of Abdat describes an encoding process similar to Welch, in that new symbols are added to the dictionary as

concatenations of a known symbols with the next symbol in the data stream, incrementally, one character at a time (Col. 2, line 19 – Col. 3, line 53).

It has been held by the courts that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As illustrated above, neither Welch nor Abdat, taken singly or in any combination, either teaches or suggests all recited elements of the claims. Therefore, Applicant respectfully submits that the claims are patentably distinguished over Welch and Abdat, and that the rejection has been obviated. Favorable reconsideration and withdrawal is kindly requested.

In the interest of brevity, Applicant has addressed only so much of the rejections as is considered necessary to demonstrate the patentability of the claims. Applicant's failure to address any part of the rejection should not be construed as acquiescence in the propriety of such portions not addressed. Applicant maintains that the claims are patentable for reasons other than these specifically discussed, *supra*.

In light of the foregoing, Applicant respectfully submits that all claims recite patentable subject matter. An early and favorable indication of allowability is kindly solicited.

Respectfully submitted,



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